Frequency of Detection of Seneca Valley Virus

- We requested SHMP participants to report frequency of Seneca Valley virus cases at any time in the past. Below are the reported cases to date.

Week	Frequency	Clinical signs
Jul 24 - 30	1 sow farm	Prewean mortality
Jul 31 - Sept 6	0	
Aug 7 - 13	1 sow farm	Prewean mortality
Aug 14 - 20	1 sow farm	Prewean mortality
Aug 21 - 27	0	
Aug 28 - Sept 3	1 sow farm	Prewean mortality and vesicles in both herds
Sept 4 - 10	0	
Sept 11 - 17	2 sow farms	Prewean mortality and vesicles in both herds
	1 GDU	Lameness and vesicles
Sept 18 - 24	3 sow farms	Prewean mortality and vesicles in both herds
Sept 25 - Oct 1	0	

Factors associated with epidemic transient neonatal losses in Brazil

Daniel Linhares, Ronaldo Teixeira
[1]Iowa State University, [2]Ministry of Agriculture, Livestock and Supply (Brazil)

Key points

- Epidemic transient neonatal losses (ETNL) affects < 7 days old piglets and has duration of ~ 1 week
- Some ETNL cases coincide with idiopathic vesicular disease (IDV) in sows and/or growing pigs
- Senecavirus A is thought to play a role on ETNL and IDV
- Preliminary results suggested the following risk factors: proximity to neighbors with ETNL; cattle nearby; bovine or swine plasma; using 2 specific vaccines
- Further studies are needed to better understand significance of these findings and to understand the role of Senecavirus A on ETNL and IDV outcomes.

Background

A mortality syndrome affecting neonatal piglets in Brazil has recently been reported (Vannucci et al., 2015). The syndrome had a sudden onset, appeared to be self-limiting and caused 30-70% mortality in neonatal piglets for about 1 week (4-10 days). The syndrome was reported in several geographical regions within a short period of time. The syndrome has been referenced as epidemic transient neonatal losses (ETNL) and it is associated with or caused by Senecavirus A.

Study

We submitted a questionnaire to swine veterinarians and asked them to fill out for matching “cases” and “control” breeding herds. Definition of “case” was based on clinical observation of ETNL. Control herds were defined as not experiencing significant neonatal loss changes during the same time interval. Control herds were located in the same geographical region. Descriptive and univariate stats were used to describe clinical outcomes and investigate potential risk factors.

Results

Preliminary results from 42 cases and 38 controls.

	Occasional finding (<40% cases)	Frequent finding (40-60% cases)	Highly prevalent finding (>60% cases)	Comment
Piglets	Subcutaneous edema (neck) Nervous signs (4% cases) Vesicular lesions in piglets (2%)	Mesocolonic edema w/ or w/o diarrhea	Stomach filled with milk/colostrum, lethargy, diarrhea (not hemorrhagic)	High mortality (>80%) among 0-3 days old, no change in mortality in >7 days old piglets
Sows	Vesicular lesions in snouts and/or foot (coronary bands, footpad, interdigital area): 0 to 30% sows			Apparent absence of reproductive disease

Risk factors outcomes (preliminary):
Not significant: Nutrition company; source of grains; genetic company; gilt source (internal vs external replacement); personnel or transport biosecurity questions, equipment sharing with neighbors, blood / bone meal, water source, perimeter fence around site, semen source or AI-related supplies.
Significant risk factors: known to have neighbors with ETNL (currently or weeks before); cattle nearby; bovine or swine plasma; using 2 specific vaccines.

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